

Application No. 10/600,683
Amendment "A" dated April 25, 2006
Reply to Office Action mailed January 25, 2006

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a system that includes a user computer that communicates with a server computer over a network, a method for mitigating a cross-site scripting attack, the method comprising:

receiving a request from a user computer, wherein the request includes data derived from an outside source;

determining if the request from the user computer includes a marker of active content; and

refraining from executing the request if the request includes the marker of active content;

informing the user computer that a marker of active content has been discovered in the request; and

requesting that the user computer resubmit the request and subsequently executing the resubmitted request only upon determining that it does not contain the marker of active content.

2. (Original) A method as defined in claim 1, wherein receiving a request from a user computer further comprises receiving an HTTP request from the user computer.

3. (Original) A method as defined in claim 1, wherein receiving a request from a user computer further comprises at least one of:

receiving a cookie from the user computer;

receiving a query string from the user computer;

receiving an HTTP form from the user computer; and

receiving one or more HTTP headers from the user computer.

Application No. 10/600,683
Amendment "A" dated April 25, 2006
Reply to Office Action mailed January 25, 2006

4. (Original) A method as defined in claim 3, wherein determining if the request from the user computer includes a marker of active content further comprises evaluating only a portion of the request that includes the data derived from an outside source.

5. (Original) A method as defined in claim 1, wherein determining if the request from the user computer includes a marker of active content further comprises at least one of:

searching the request for one or more character combinations that correspond to a script construct;

searching the request for an event that includes a script construct; and

searching the request for an expression that includes a script construct.

6. (Original) A method as defined in claim 1, wherein determining if the request from the user computer includes a marker of active content further comprises searching the request for a pattern that indicates an unauthorized script.

7. (Currently Amended) A method as defined in claim 1, ~~wherein refraining from executing the request if the request includes the marker of active content further comprising~~ comprising at least one of:

generating an event that is logged at the server; and

encoding a response that is delivered to the user computer informing the user computer of discovery of the marker of active content; and

requiring the user computer to re-submit the request.

Application No. 10/600,683
Amendment "A" dated April 25, 2006
Reply to Office Action mailed January 25, 2006

8. (Currently Amended) In a system that includes a user computer that communicates with a server computer over a network, wherein the server computer generates dynamic content based on input from the user computer, a method for mitigating a cross-site scripting attack such that data submitted to the server computer is not sent back to the user computer as script, the method comprising:

receiving an HTTP request at a server computer, wherein the HTTP request includes input data that was not generated by the server computer;

evaluating the HTTP request to determine if the input data includes a script construct, wherein the script construct indicates that HTTP request is part of a cross-site scripting attack; and

refusing to execute the HTTP request and thereby preventing the cross-site scripting attack if the input data includes a script construct;

generating a response indicating that a script construct indicative of a cross-site scripting attack has been received; and

requesting resubmission of the HTTP request and subsequently executing the resubmitted HTTP request only upon determining that it does not contain the script construct.

9. (Original) A method as defined in claim 8, wherein receiving an HTTP request at a server computer further comprises at least one of:

receiving a query string that includes at least one query string variable;

receiving a cookie;

receiving one or more headers in the HTTP request; and

receiving one or more form fields.

Application No. 10/600,683
Amendment "A" dated April 25, 2006
Reply to Office Action mailed January 25, 2006

10. (Original) A method as defined in claim 8, wherein evaluating the HTTP request to determine if the input data includes a script construct further comprises at least one of:
- searching the HTTP request for one or more character combinations that correspond to a script construct;
 - searching the HTTP request for an event that includes a script construct;
 - searching server variables that derive input data from another source; and
 - searching the HTTP request for an expression that includes a script construct.
11. (Original) A method as defined in claim 8, wherein evaluating the HTTP request to determine if the input data includes a script construct further comprises searching the input data for a script construct.
12. (Original) A method as defined in claim 11, wherein searching the input data for a script construct further comprises searching for patterns associated with scripts.
13. (Original) A method as defined in claim 8, wherein preventing the cross-site scripting attack if the input data includes a script construct further comprises refraining from executing the HTTP request.
14. (Original) A method as defined in claim 8, wherein preventing the cross-site scripting attack if the input data includes a script construct further comprises logging an event at the server computer.
15. (Original) A method as defined in claim 8, wherein preventing the cross-site scripting attack if the input data includes a script construct further comprises encoding the user input including the script construct to render the script inert.

Application No. 10/600,683
Amendment "A" dated April 25, 2006
Reply to Office Action mailed January 25, 2006

16. (Original) A method as defined in claim 8, wherein evaluating the HTTP request to determine if the input data includes a script construct further comprises evaluating the HTTP request to determine in the input data includes a marker of active content.

17. (Original) A method as defined in claim 16, wherein evaluating the HTTP request to determine in the input data includes a marker of active content further comprises determining if the marker of active content is within a particular element, wherein the marker of active content is harmful only when rendered within the particular element.

Application No. 10/600,683
Amendment "A" dated April 25, 2006
Reply to Office Action mailed January 25, 2006

18. (Currently Amended) In a system that includes a user computer that communicates with a server computer over a network, wherein the server computer generates dynamic content based on input from the user computer, a computer program product for implementing a method for mitigating a cross-site scripting attack such that input data submitted to the server computer is not sent back to the user computer as script, the computer program product comprising:

a computer-readable medium having computer executable instructions for performing the method, the method comprising:

receiving an HTTP request at a server computer, wherein the HTTP request includes input data that was not generated by the server computer;

evaluating the HTTP request to determine if the input data includes a script construct that indicates a cross-site scripting attack; ~~and~~

refusing to execute the HTTP request and thereby preventing the cross-site scripting attack if the input data includes a script construct;

generating a response indicating that a script construct indicative of a cross-site scripting attack has been received; and

requesting resubmission of the HTTP request and subsequently executing the resubmitted HTTP request only upon determining that it does not contain the script construct.

19. (Original) A computer program product as defined in claim 18, wherein receiving an HTTP request at a server computer further comprises at least one of:

receiving a query string that includes query string variables;

receiving a cookie;

receiving one or more headers in the HTTP request; and

receiving one or more form fields.

Application No. 10/600,683
Amendment "A" dated April 25, 2006
Reply to Office Action mailed January 25, 2006

20. (Original) A computer program product as defined in claim 18, wherein evaluating the HTTP request to determine if the input data includes a script construct further comprises at least one of:

searching the HTTP request for one or more character combinations that correspond to a script construct;

searching the HTTP request for an event that includes a script construct;

searching server variables that derive input data from another source; and

searching the HTTP request for an expression that includes a script construct.

21. (Original) A computer program product as defined in claim 18, wherein evaluating the HTTP request to determine if the input data includes a script construct further comprises searching the input data for a script construct.

22. (Original) A computer program product as defined in claim 21, wherein searching the input data for a script construct further comprises searching for patterns associated with scripts.

23. (Original) A computer program product as defined in claim 18, wherein preventing the cross-site scripting attack if the input data includes a script construct further comprises refraining from executing the HTTP request.

24. (Original) A computer program product as defined in claim 18, wherein preventing the cross-site scripting attack if the input data includes a script construct further comprises logging an event at the server computer.

25. (Original) A computer program product as defined in claim 18, wherein preventing the cross-site scripting attack if the input data includes a script construct further comprises encoding the user input including the script construct to render the script inert.